

Amendments to the Claims

This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims

1. (Currently Amended) A data transmission device with at least one data adaptation device and one data distributing device, [[which]] the data transmission device [[is]] being connected between at least one process control computer arranged in a non-Ex area and field units connected thereto via a bus system, wherein the process control computer and field units are parts of a process control system and the data transmission device is, in particular, intrinsically safe, and arranged in an Ex area, wherein the data adaptation device and [[the]] supply devices assigned thereto are formed so that they are explosion-proof and each supply device is connected to the data distributing device [[s]] via an explosion-proof line, wherein either [[this]] the data distributing device or the field units connected thereto, which are also arranged in the Ex area, have a barrier device for limiting [[the]] applied power.

2. (Previously Presented) The data transmission device according to claim 1, wherein the data adaptation devices and / or supply devices can be mounted on a backwall plate that has a field bus for communication among the devices and with the process control computer.

3. (Previously Presented) The data transmission device according to claim 1, wherein the data adaptation device has a data matching and / or data converting circuit.

4. (Previously Presented) The data transmission device according to claim 1, wherein the data adaptation devices and / or supply devices are encapsulated in an explosion-proof manner.

5. (Previously Presented) The data transmission device according to claim 1, wherein the supply device has at least one output with extended safety (Ex-e).

6. (Previously Presented) The data transmission device according to claim 1, wherein the data distributing device and / or field unit is formed for intrinsically safe (Ex-i) signal matching.

7. (Previously Presented) The data transmission device according to claim 1, wherein the barrier device is integrated in the field unit or in the data distributing device.

8. (Previously Presented) The data transmission device according to claim 1, wherein the barrier device is a safety barrier with Zener diodes and / or resistors and / or fuses.

9. (Previously Presented) The data transmission device according to claim 1, wherein the data distributing device and field unit are connected by means of connection lines rated as intrinsically safe (Ex-i) or having extended safety (Ex-e).

10. (Previously Presented) The data transmission device according to claim 1, wherein the data distributing device is a junction box.

11. (Currently Amended) The data transmission device according to claim 1, wherein the bus system between the process control computer and backwall plate or bus interface module on the backwall plate is a Profibus ~~or the like~~.

12. (Currently Amended) The data transmission device according to claim [[1]] 2, wherein I/O signal matching modules can be mounted on the backwall plate.

13. (Previously Presented) The data transmission device according to claim 1, wherein the field units are sensors and / or actuators.

14. (Previously Presented) The data transmission device according to claim 1,

wherein the process control computer is connected to a server via a high-speed data transmission device.

15. (Currently Amended) The data transmission device according to claim [[1]] 14, wherein the server is connected to an input device for, at least, maintenance and modification of the process control system.

16. (Previously Presented) The data transmission device according to claim 1, wherein the data adaptation device is connected directly to the process control computer.